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(58) Field of search

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(54) Advertising panels for use with aerials

(57) An advertising panel 1, which is intended to be located at the entrance of a large installation such as an underground railway system, has a display surface 5 on which an advertisement is displayed and a loop aerial 2 accommodated within a recess 3 in the rear of the panel 1. In an emergency a radio may be connected to the aerial 2 by means of a socket 4 to provide high quality transmission of signals to, and reception of signals from, remotely located radios within the installation.

FIG 1

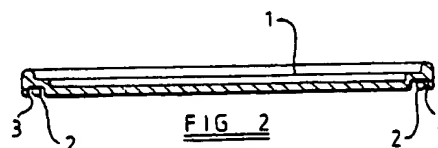
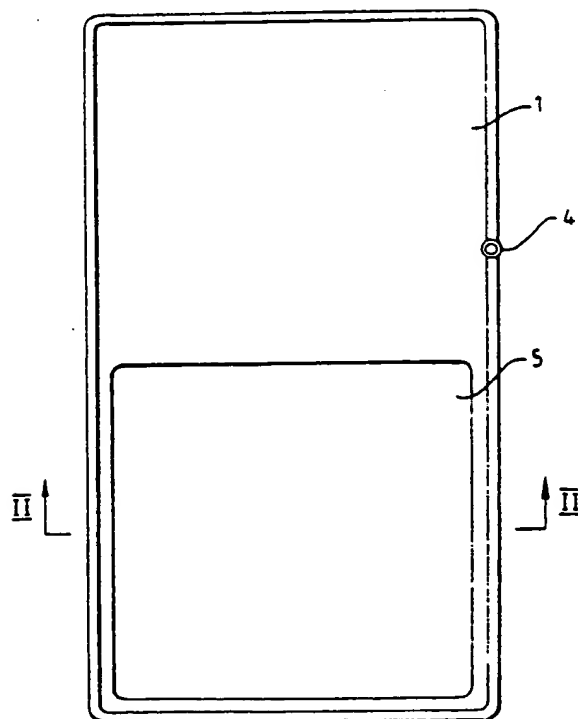
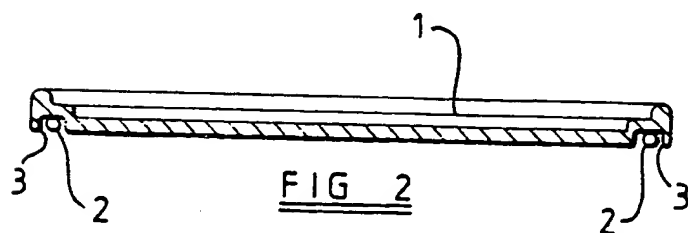
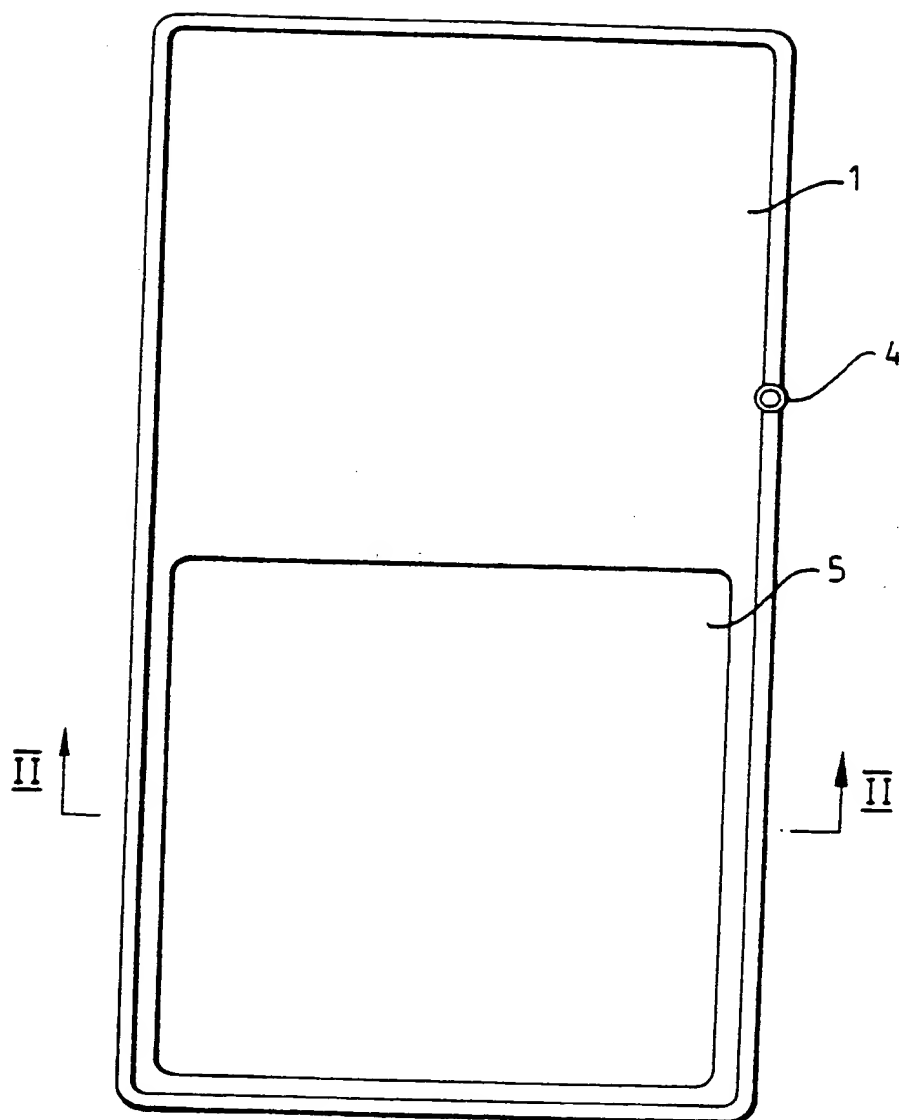
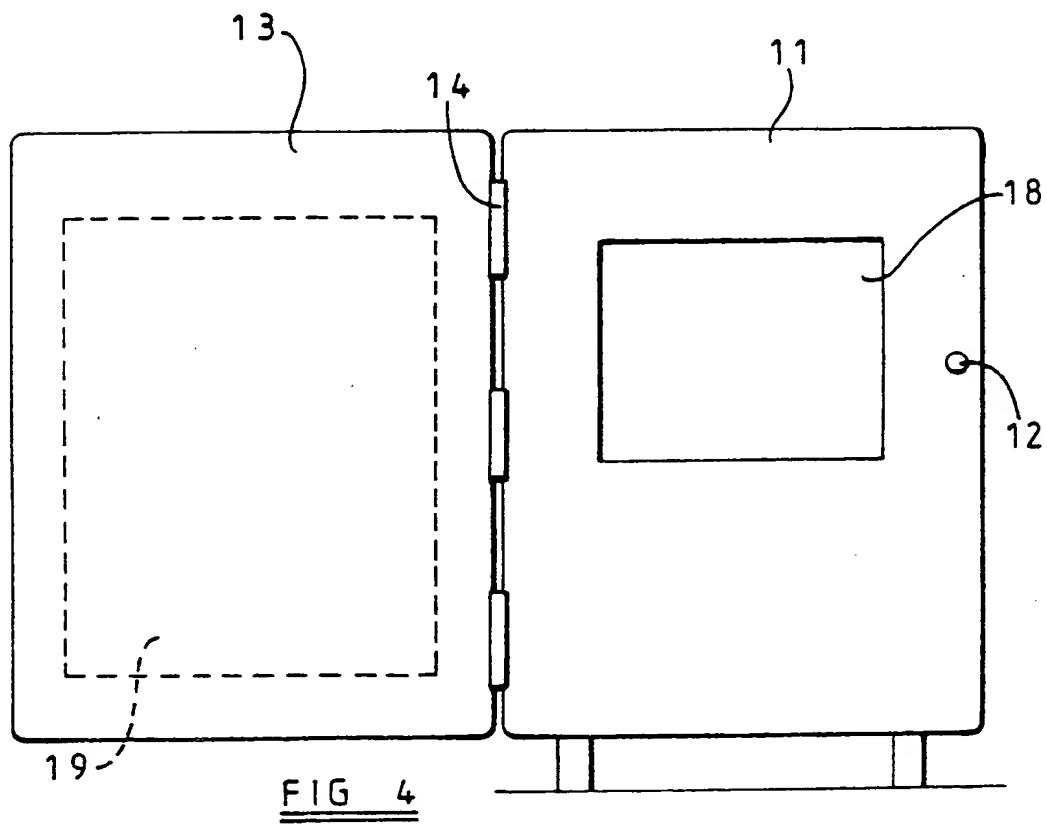
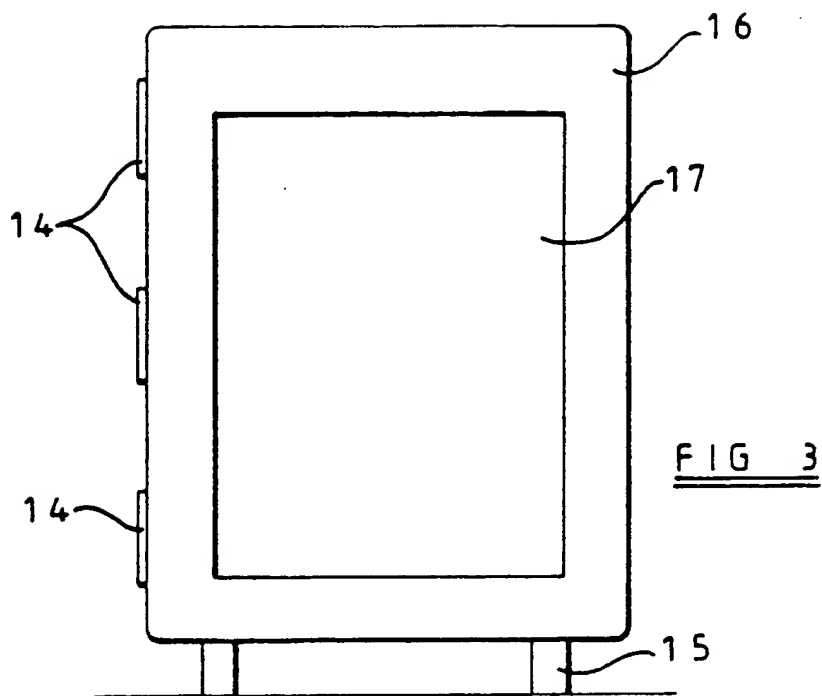


FIG 1FIG 2



ADVERTISING PANELS

This invention relates to advertising panels and is more particularly, but not exclusively, concerned with advertising panels for use in underground railway
5 or subway systems or petrochemical installations or large complexes, such as shopping centres.

In certain installations including, for example, underground railway systems, shopping centres and "high-rise" buildings, there can be difficulties in
10 maintaining adequate communication in the case of an emergency, such as a fire. In such an emergency, normal communication by telephone and the like is normally not practicable or desirable, and there is therefore a need for an alternative means of communication in such an
15 event.

In most cases of emergency, the police, ambulance service or fire fighting personnel require communication between a base station at, say, the entrance to the installation and one or more mobile
20 stations within the installation. It is generally impracticable on cost grounds alone to provide each location within the installation with its own communications equipment, such as a radio. However it is important that the communications equipment to be
25 used in an emergency has been tried and tested prior to the emergency arising, and this requires in particular an aerial for the equipment which has been previously tested to ensure adequate communication throughout the

whole of the installation.

It is an object of the invention to provide a novel form of advertising panel for location at a suitable position in such an installation, for example
5 at the entrance, and which can be used to provide such communication in an emergency.

In accordance with the invention, there is provided an advertising panel having a display surface on which an advertisement is displayed, characterised in
10 that the panel incorporates an aerial.

Such an advertising panel can be permanently located at the required position and can include a high quality aerial which has been tested to ensure its suitability for communication within the installation.

15 It is preferred that the panel incorporates a tuning circuit for the aerial to ensure that it operates efficiently at a predetermined radio frequency, and that the panel also includes an aerial connector for connection of a portable transmitter
20 and/or a receiver to the aerial. Thus, in an emergency, a portable radio is simply connected to the aerial by means of the connector to establish communication with other, remotely located radios.

It is important that the attachment of the
25 aerial to, or containment of the aerial within, the panel is effected such that the panel can be utilised for the presentation of advertising matter. To this end the panel may have an outer surface to which is affixed

an advertisement, such as an advertising poster.

Alternatively, the panel may have an outer compartment within which an advertisement may be enclosed and viewed, for example through a transparent
5 outer wall of the compartment.

In certain preferred embodiments, the panel may comprise two (or more) components connected to one another to form a compartment therebetween. For example, a rear component may have the aerial attached
10 to it or contained within it and a front component may be utilised for advertising purposes in the manner described above. The components can be hingedly connected to one another, preferably so that the rear component with the aerial is fixed to a floor or a wall
15 and the second component with the advertising matter hingedly connected to the first component to provide access to the compartment.

The compartment may contain the aerial connector on the rear component. In addition the
20 compartment may include information relevant to the location of the panel, for example a map or general layout of the underground station or building. Such a compartment may also contain additional equipment such as a telephone or telephone plug, a television socket, a
25 connector for a "leaky feeder" system or tannoy apparatus, or some other form of supplementary communications connector.

Generally, the panel should possess means for

attachment to a support surface, preferably a wall, at a predetermined position in the area. Alternatively, the panel may be constructed so as to be free-standing or to have means to attach it to a floor.

5 The advertising space may be of any shape but is preferably rectangular. Equally, the size will be dependent on the aerial requirements and on the space available at the location.

 The aerial itself may be in the form of an
10 electrically conductive loop extending around the periphery of the panel, and may comprise a single or part-turn of wire around a framework of the panel. Alternatively it may comprise several turns of wire or braiding, which is normally of copper, although any
15 other conductive aerial material may be employed including aluminium. The latter material in particular could actually form part of a frame for the advertisement itself.

 The aerial may also be a ferrite aerial
20 comprising a ferrite core around which a wire or wires are wound.

 The operating frequency of the aerial would generally be determined by the requirements of the radio system to which it is to be connected, and might be for
25 example 3 MHz where a medium frequency radio system is used. In this case the aerial will induce signals in all the surrounding metalwork of the installation and this will aid in transmission of signals throughout the

installation.

Preferably the aerial operates without any external power source; however, a power source could be included in the panel of the invention if necessary.

5 For a better understanding of the invention, reference will now be made, by way of example, to the accompanying drawings, in which:-

Figure 1 is a front view of an advertising panel in accordance with the invention,

10 Figure 2 is a sectional view along the line II - II of Figure 1 showing the aerial as part of the panel,

Figure 3 is a front view of a two-component panel in accordance with the invention in a "closed" position, and

15 Figure 4 is a front view of the panel in an "open" position.

With reference to Figures 1 and 2, the illustrated advertising panel 1 is of integral one-piece laminar construction having, in its rear surface, a
20 peripheral recess 3 accommodating an aerial 2 secured therein (by means not shown). The aerial 2 may be secured in the recess 3 by adhesive or by clips. Alternatively the aerial 2 may be secured to the outer
25 perimeter of the panel 1, either at the front or back of the panel, or may be bonded into the fabric of the panel itself during construction. The aerial 2 is made from copper braid and runs around the recess 3 to form a

rectangular loop terminating at a small housing (not shown) to which there is screwed a socket 4 into which a radio receiver may be plugged for communication by way of the aerial 2. The housing incorporates a
5 conventional aerial tuning circuit including capacitors and/or inductors by means of which the aerial 2 is tuned to the selected frequency of operation.

In use the rear surface having the recess 3 is fixed to a wall at a predetermined position leaving the
10 front surface open to view. A recessed portion 5 of the front surface constitutes a display surface for advertising matter, for example an advertising poster, whilst the remainder of the front surface is used for information relating to the aerial.

15 In other embodiments of the invention, the panel may be of non-integral construction, that is it may be made up of a plurality of parts. It may also include means to contain, for example beneath an openable cover, information concerning the location in
20 which the aerial is located, for example a map of the area. A map is photographically printed onto a sheet fixed to the panel 1. At points on the map corresponding to the location of heat/temperature/smoke sensors within the installation small lamps (either
25 incandescent or light-emitting diodes) are fitted, in each case by piercing the panel and screwing the lamp in position. The lamps are connected to a logic circuit which in turn is connected to an alarm panel inside the

installation. The logic circuit recognises when a sensor has tripped and latches the corresponding lamp on the map into the 'on' state. A battery back-up may maintain the alarm state/lamp on condition regardless of
5 what may occur within the installation later. A solar panel may be used to provide the stand-by battery with a small charge during periods of non-use.

Figures 3 and 4 show a two-component panel 10 of the invention comprising the rear component 11
10 accommodating an aerial on a rear face thereof in the same manner as the panel 1 of Figures 1 and 2, and having an aerial socket 12 on the front face thereof, and also comprising a front component 13 connected to the rear component by means of hinges 14. The rear
15 component has legs 15 so that the panel 10 as a whole is free-standing.

The front component 13 has a display surface 16 to which advertising matter can be affixed, normally in an area 17 of the surface 16, and which in
20 the "closed" position shown in Figure 3 is on an outer surface of the panel 10 as a whole.

When the panel 10 is opened by pivoting the component 13 about the hinges 14 into the "open" position shown in Figure 4, when the aerial is to be
25 used, a compartment is revealed containing not only a radio aerial socket 12 but also information concerning the location of the aerial in the form of a map 18 on the component 11 and a general layout 19 on the

component 13.

CLAIMS

1. An advertising panel having a display surface on which an advertisement is displayed, wherein the panel incorporates an aerial.
- 5 2. An advertising panel according to Claim 1, wherein the panel incorporates a tuning circuit for the aerial.
3. An advertising panel according to Claim 1 or Claim 2, wherein the panel incorporates an aerial
10 connector provided for connection of a portable transmitter and/or receiver to the aerial.
4. An advertising panel according to Claim 1, 2 or 3, wherein the panel incorporates a supplementary communications connector provided for connection of a
15 portable transmitter and/or receiver to a telephone or other communications system.
5. An advertising panel according to any preceding claim, wherein the aerial is in the form of an electrically conductive loop extending around the
20 periphery of the panel.
6. An advertising panel according to any preceding claim, wherein the aerial is accommodated in a recess in a rear surface of the panel.
7. An advertising panel according to any
25 preceding claim, wherein the panel comprises two components connected to one another to form a compartment therebetween.
8. An advertising panel according to Claim 7,

wherein the aerial is part of a rear component of the panel and the display surface is provided on a front component of the panel.

9. An advertising panel according to Claim 7 or
5 8, wherein one component is hingedly connected to the other component to provide access to the compartment.

10. An advertising panel according to any preceding claim, wherein the panel incorporates a visual display providing an indication of actuation of
10 at least one remote sensor.

11. An advertising panel substantially as hereinbefore described with reference to Figures 1 and 2 or Figures 3 and 4 of the accompanying drawings.

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